

Influenza Vaccination of Healthcare Personnel: Update on SHEA/IDSA Position Paper

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Disclosures

- **Representing**
 - **Society for Healthcare Epidemiology of America (SHEA)**
 - **Infectious Disease Society of America (IDSA)**
- **Self:**
 - **Merck:** part of diversified, managed fund
- **Spouse:**
 - **None**
- **Slide sharing from Tom Talbot, Paul Offit**

Revised SHEA Position Paper: Influenza Vaccination of Healthcare Personnel



SHEA views influenza vaccination of HCP as a *core patient and HCP safety practice* with which noncompliance should not be tolerated. It is the professional and ethical responsibility of HCP and the institutions within which they work to prevent the spread of infectious pathogens to their patients through evidence-based infection prevention practices, including influenza vaccination. Therefore, for the safety of both patients and HCP, SHEA endorses a policy in which annual influenza vaccination is a condition of both initial and continued HCP employment and/or professional privileges. The implementation of this policy should be part of a multifaceted, comprehensive influenza infection control program; it must have full, visible leadership support with the expectation for influenza vaccination fully and clearly communicated to all existing and applicant HCP; and it must have ample resources and support to implement and to sustain the HCP vaccination program. This recommendation applies to all HCP working in all healthcare settings, regardless of whether the HCP have direct patient contact or whether the HCP are directly employed by the facility. It also applies to all students, volunteers, and contract workers. SHEA recommends that only exemptions due to recognized medical contraindications to influenza vaccination be considered.

Summary of Specific Recommendations

- Annual influenza vaccination for healthcare personnel (HCPs) should be a condition of initial and continued employment/ professional privilege
- Allow only medical exemptions
 - Severe egg allergy or prior allergic response to influenza vaccine; +/- GBS history
 - Consider mask use by unvaccinated
- Part of comprehensive influenza plan

Background

- Rationale for influenza vaccination of healthcare personnel (HCPs)
- Rationale for mandatory influenza vaccination, as a “condition of employment”

**DON'T GET THE FLU.
DON'T SPREAD THE FLU.
GET VACCINATED.**

Prevention of Healthcare-Associated Influenza

- Early identification/isolation of suspect cases
- Source control/mask patient
- Restrict ill visitors/healthcare personnel
- Hand hygiene, respiratory etiquette
- Personal protective equipment
- Vaccination of patients
- Antiviral prophylaxis (prn)
- **Vaccination of HCP**
 - **Recommended since 1984**

ATTENTION
AVISO IMPORTANTE

If you have a fever AND any of the following:

<input type="checkbox"/> Fever	<input type="checkbox"/> Runny nose
<input type="checkbox"/> Chills	<input type="checkbox"/> Sore throat
<input type="checkbox"/> Cough	<input type="checkbox"/> Headache, muscle or joint pain

OR, If you think you have the flu...


Please see the receptionist immediately.

Si usted tiene una fiebre Y cualquiera de lo siguiente:

<input type="checkbox"/> Fiebre	<input type="checkbox"/> Moqueo
<input type="checkbox"/> Escalofríos	<input type="checkbox"/> Dolor de garganta
<input type="checkbox"/> Tos	<input type="checkbox"/> Dolor de cabeza, dolor muscular o de articulaciones

O, Si usted piensa que usted tiene la gripe...

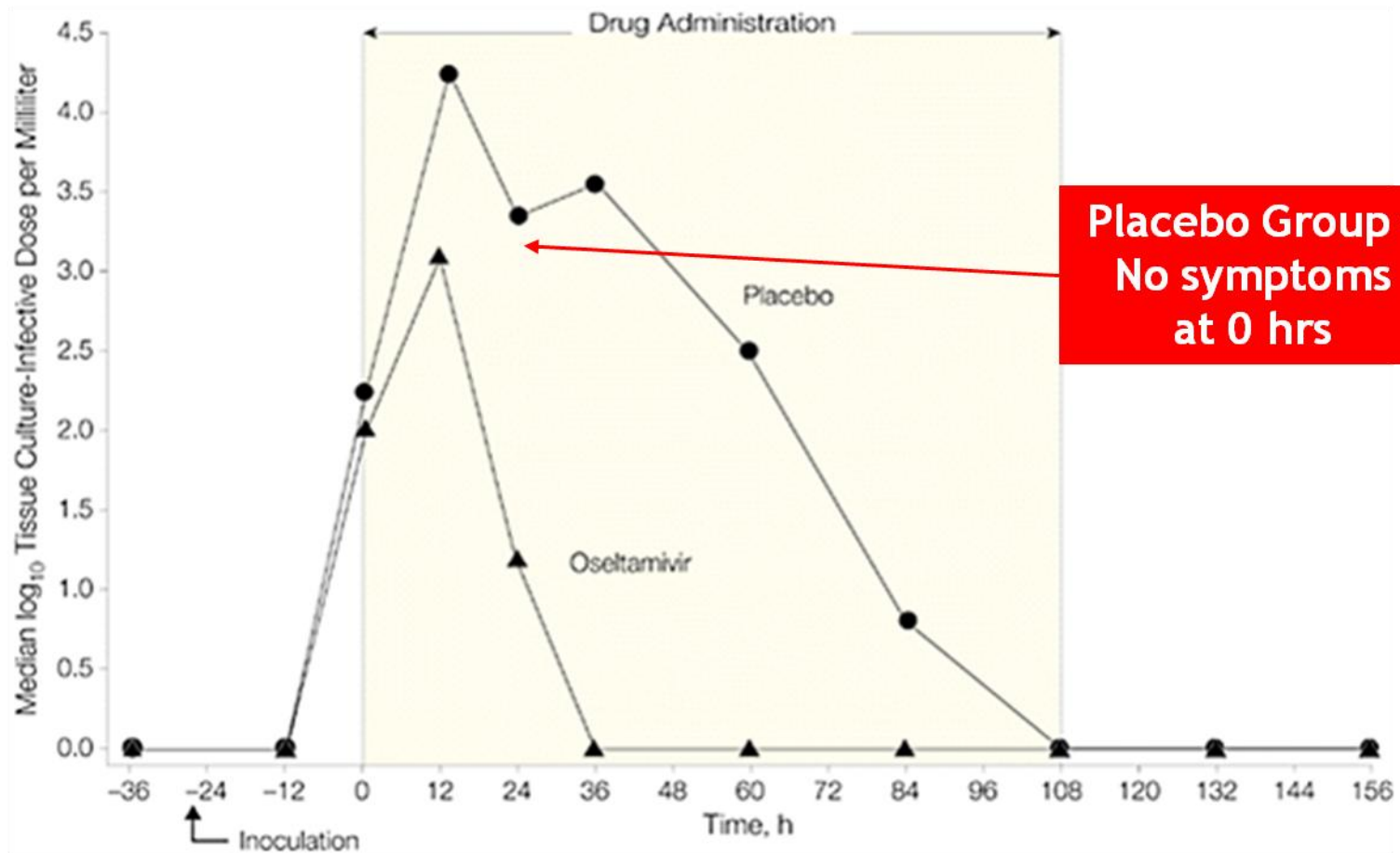
Vea por favor al recepcionista inmediatamente.


Vanderbilt Medical Center
Fierce and Proud

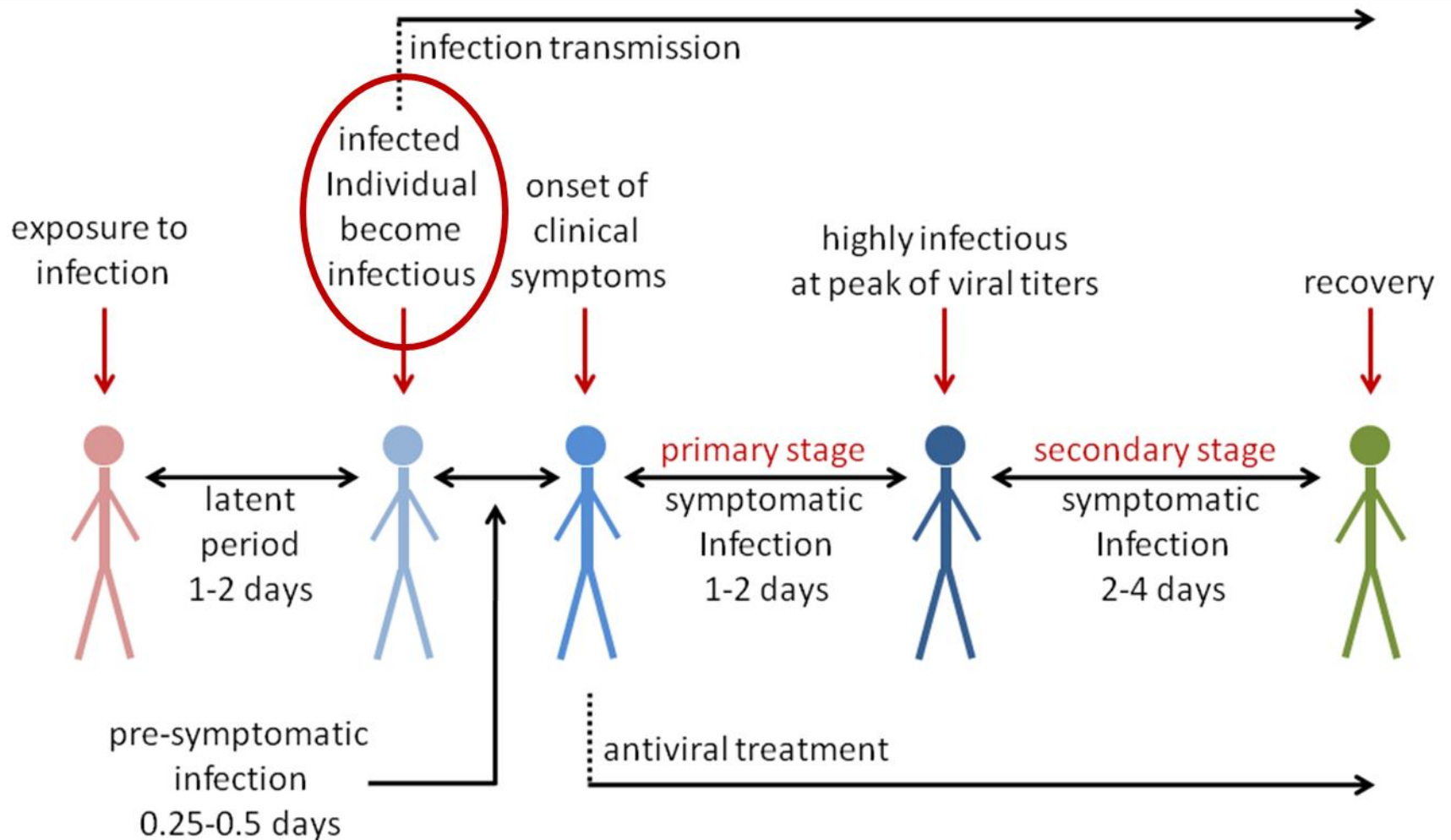
Why is Influenza Vaccination of Healthcare Personnel Recommended?

- HCPs serve as a vehicle for spread of flu
 - Frequent contact with patients at high risk of complications from influenza, who are less likely to respond to vaccination themselves
 - Work while ill
 - Shedding before symptomatic, and during mild illness
 - Transmission interrupted by HCP vaccination
- Influenza vaccination of HCP may reduce patient mortality

Asymptomatic Shedding Of Influenza Virus

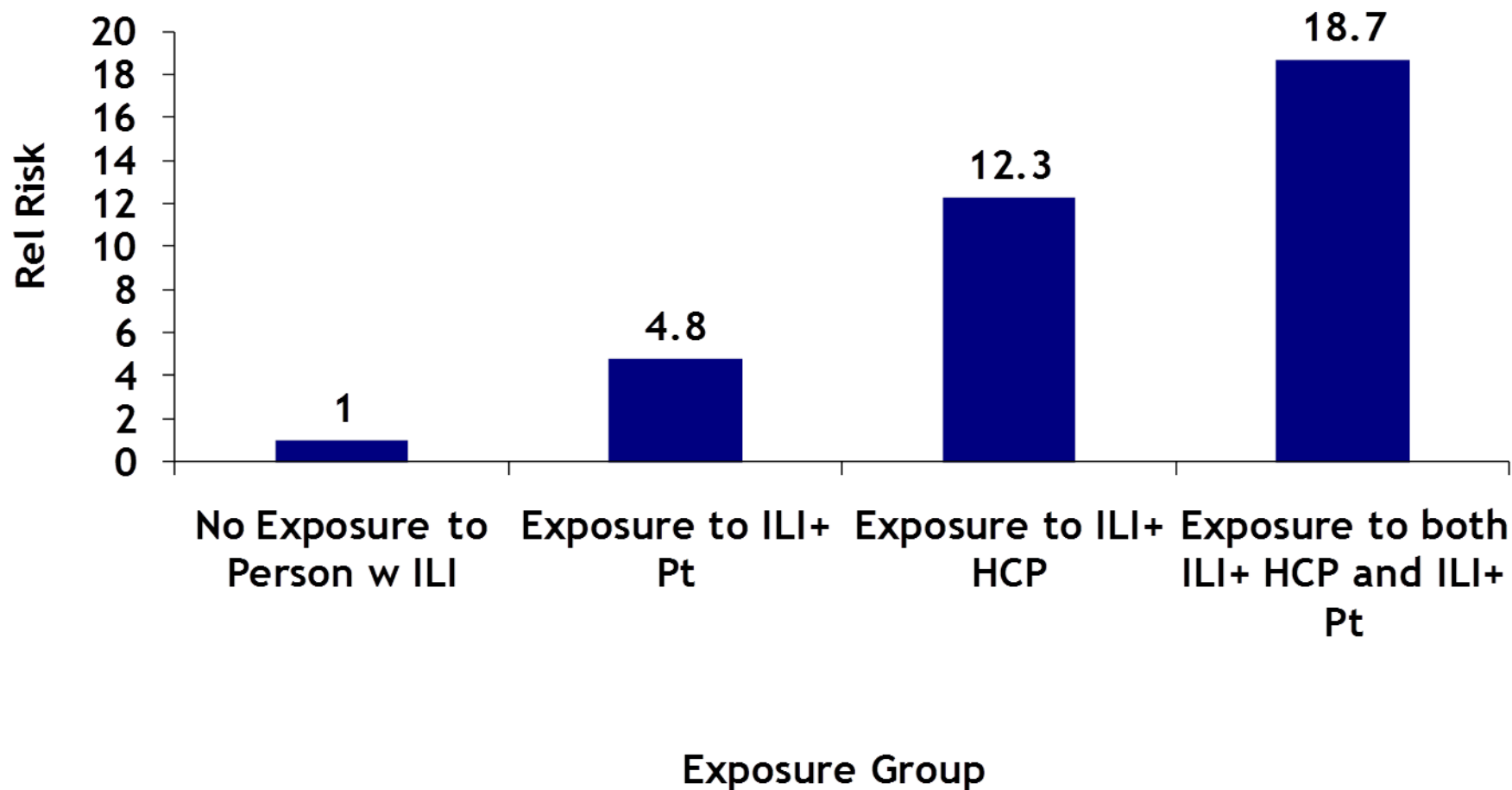


Hayden F et al JAMA 1999;282:1240+



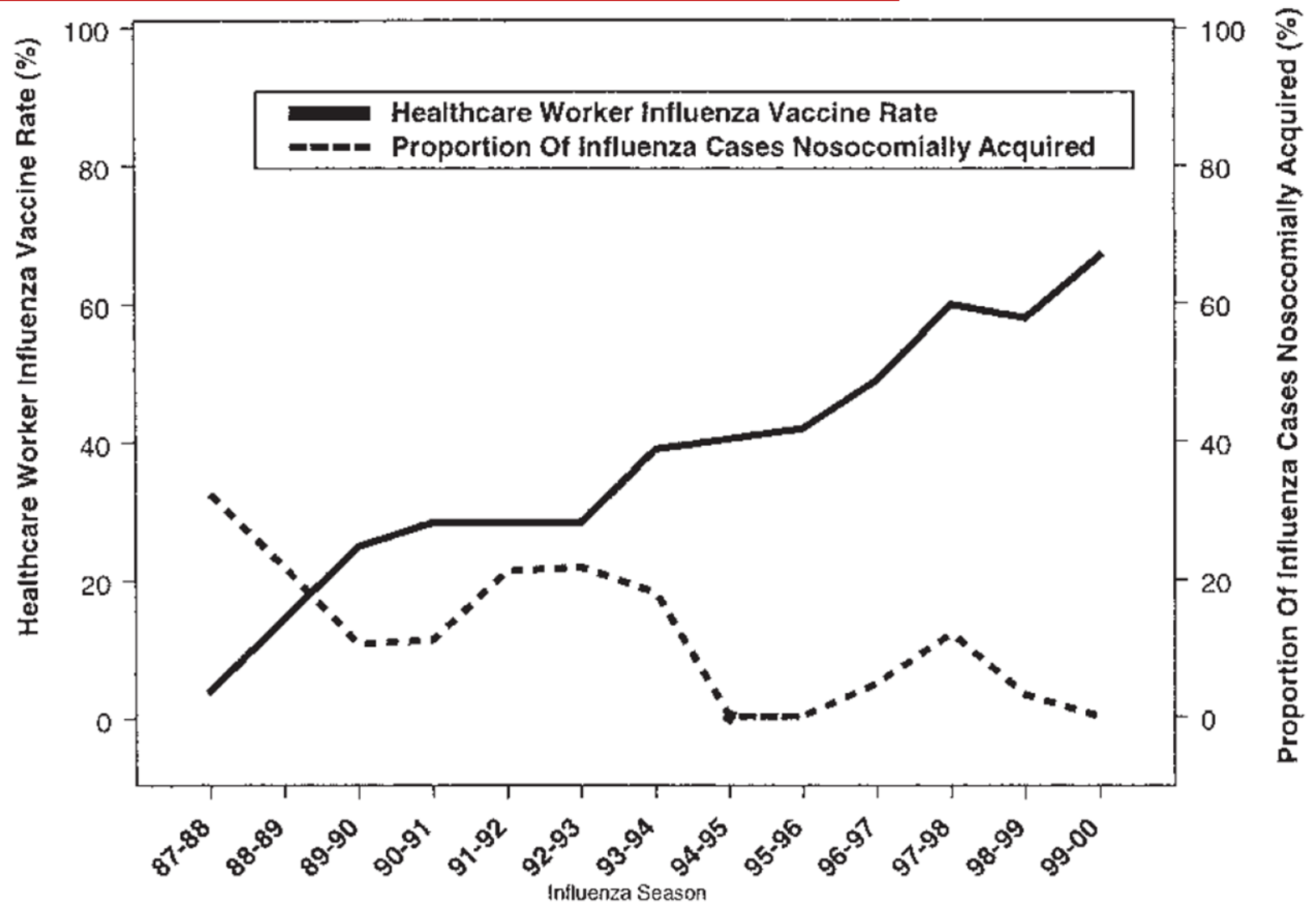
Moghadas SM et al BMC Medicine 2009;7:73+

Relative Risk of Hospital Acquired ILI



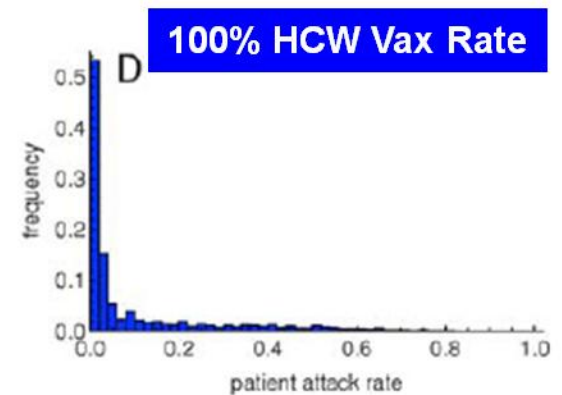
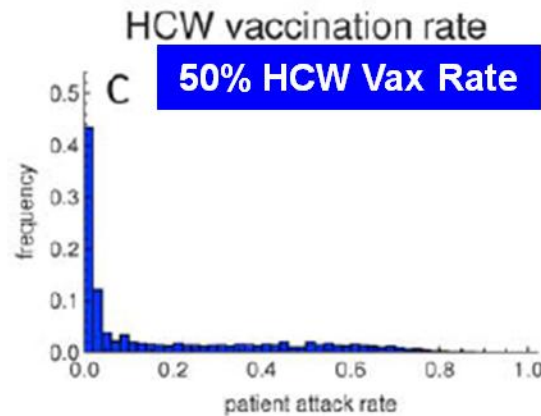
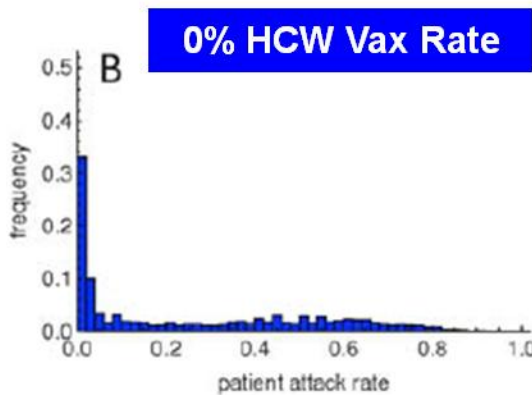
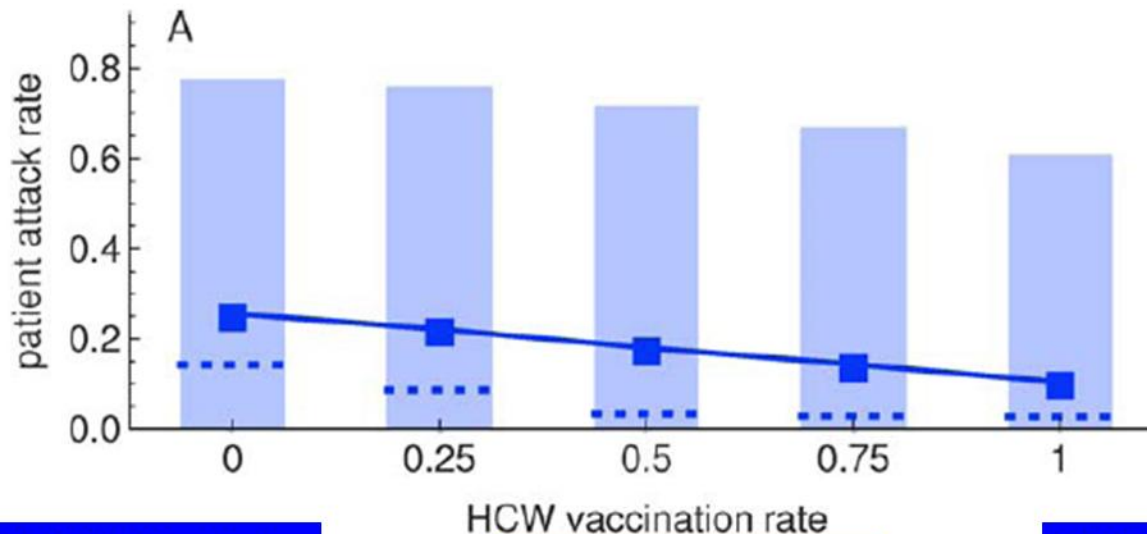
Vanhelms P et al ICAAC 2009, abstract K-1917
French hospital in Lyon, ILI surveillance X 3 years

Lower nosocomial influenza frequency significantly correlated with higher HCP vaccination coverage

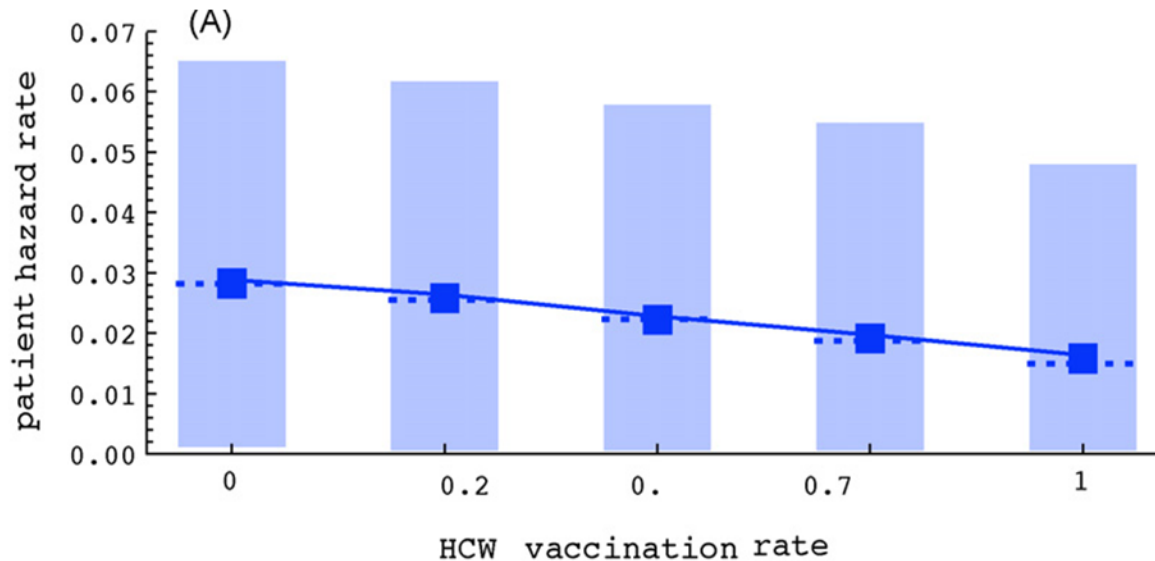


Nursing Home Model

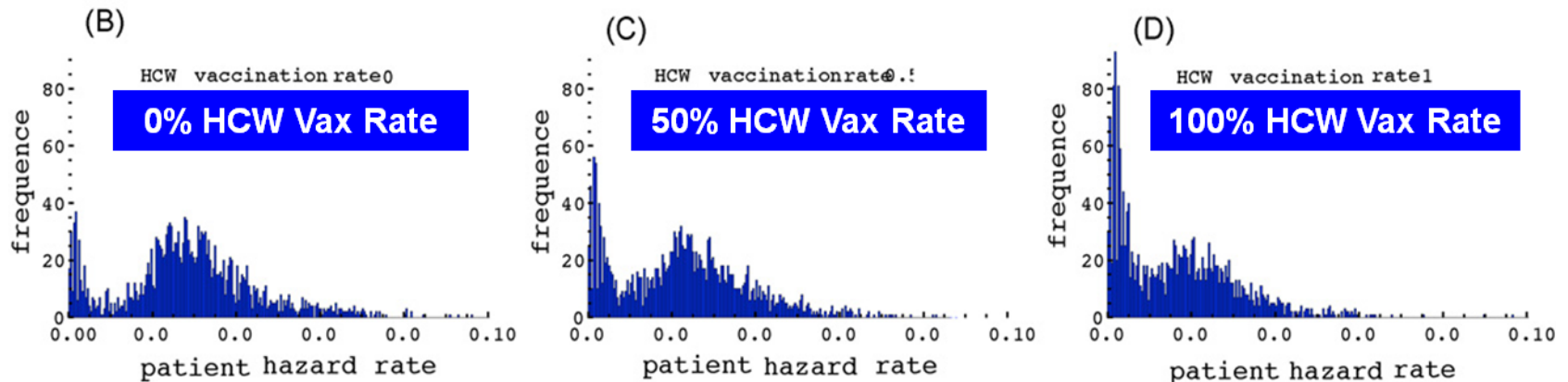
Vaccination of 100% HCWs reduced pt risk of influenza infection by 60%



Acute Care Model



Vaccination of 100% HCWs reduced pt risk of influenza infection by 43%

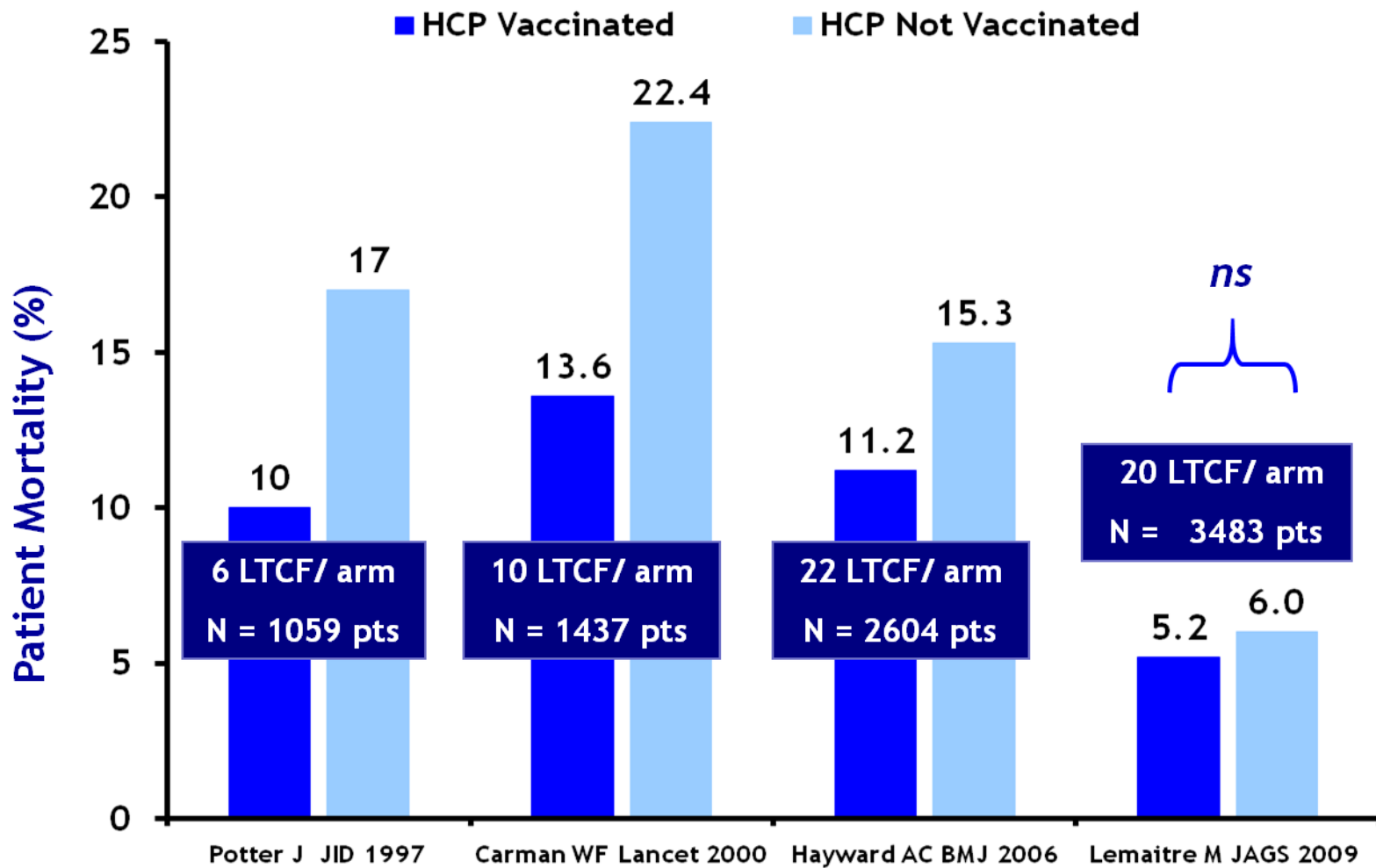


In both models, there was no HCP vaccination rate over which additional HCP vaccination coverage did not lead to further protection.

Why is Healthcare Personnel Influenza Vaccination Important?

- HCP absenteeism leads to understaffing (also a patient safety issue)
- HCPs serve as a vehicle for spread of flu
 - Shedding before symptomatic
 - Work while ill
 - Frequent contact with patients at high-risk for complications from influenza
- Influenza vaccination of HCP may reduce patient mortality

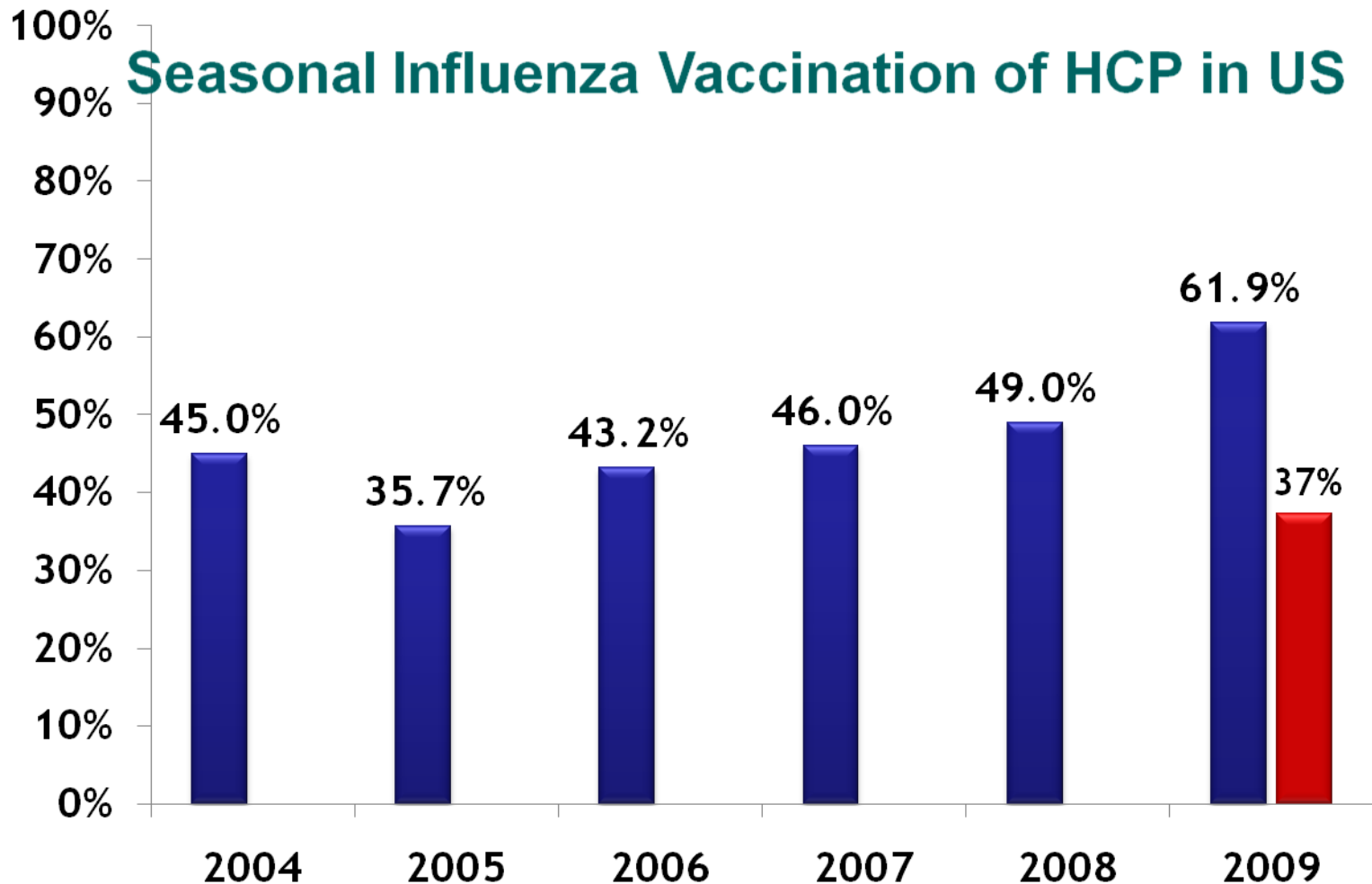
HCP Vaccination & the Impact Upon Patient Mortality (LTCF)



So how are we doing?

ONLY ABOUT 40% OF DOCTORS

Too Few Health Care Workers Are Getting Annual Flu Shot



CDC unpublished; Source NHIS

MMWR April 2, 2010

Methods to Improve HCP Vaccination Rates

Make it a priority:

- **Strong and visible administrative leadership**
- **Visible vaccination of key leaders**
- **Vaccination champions**
- **Provision of adequate staff and resources**
- **Train-the-trainer programs that empower unit staff**

Make it available:

- **Off-hours clinics**
- **Use of mobile vaccination carts**
- **Vaccination at staff/departmental meetings**
- **Provision of vaccine free of charge**

Methods to Improve HCP Vaccination Rates

Tackle the myths:

- Targeted education
- Assess comprehension of the message

Monitor and feedback progress:

- Tracking of individual & unit-based HCP vaccination compliance
- Surveillance for healthcare-associated influenza

Make it mandatory/hard to refuse

- Signed declination statements
- Condition of employment

Active Declination/Refusal

- Must have supporting resources/funding
- Allows personal choice
- Reinforces education?
- What is the content?
- What is the context?
 - Online? In person?
- What is consequence (if refuse to sign)?
- Mixed results in literature

Declination of Annual Influenza Vaccination

I understand that due to my occupational exposure, I may be at risk of acquiring influenza infection. In addition, I may spread influenza to my patients, other healthcare workers, and my family, even if I have no symptoms. This can result in serious infection, particularly in persons at high risk for influenza complications.

I have received education about the effectiveness of influenza vaccination as well as the adverse events. I have also been given the opportunity to be vaccinated with influenza vaccine, at no charge to myself. However, I decline influenza vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring influenza, potentially resulting in transmission to my patients. If in the future I want to be vaccinated with influenza vaccine, I can receive the vaccine at no charge to me.

Employee's Name: _____

Witness Name: _____

Employee's Signature: _____

Witness Signature: _____

Date: ____ / ____ / ____

Attachment B

Sample Influenza Vaccine Declination Form

Facility Name: _____

DECLINATION OF VACCINE - You MUST complete if refusing vaccine

I am eligible to receive the influenza vaccine BUT do not want to take it. I understand that by refusing the vaccine I may be putting my FAMILY, FRIENDS and PATIENTS at risk of getting influenza. I am aware that hospitalized patients are at increased risk of getting serious complications following influenza infection. Please CHECK YOUR REASON(S) for not receiving the influenza vaccine.

- | | | |
|--|--|---|
| <input type="checkbox"/> Afraid of needles | <input type="checkbox"/> Afraid of side effects | <input type="checkbox"/> Fear of getting influenza from the vaccine |
| <input type="checkbox"/> Don't believe in vaccines | <input type="checkbox"/> Don't think vaccines work | <input type="checkbox"/> I never get the flu |
| <input type="checkbox"/> Other: _____ | | |

Employee's Name (Print)

Employee's Signature

Date

Table 1. Relative Impact of Various Strategies on Health Care Worker Influenza Vaccination Coverage

Intervention and study	Preintervention immunization rate, %	Postintervention immunization rate, %	Overall change in vaccination rate, %	Randomized, controlled trial of intervention	Implemented with other interventions
Declination					
Polgreen et al [23]	54	65	+11	No	Yes
Bertin et al [25]	38	55	+17	No	Yes
Ribner et al [27]	43	65	+22	No	Yes
Mandatory vaccination					
Virginia Mason [37]	30	98	+68	No	Yes
BJC HealthCare [39]	71	99	+28	No	Yes
Education and promotion					
Harbarth et al [31]	13	37	+24	No	Yes
Thomas et al [32]	8	46	+38	No	Yes
Mobile cart					
Sartor et al [29]	7	32	+25	No	Yes
Cooper et al [30]	8	49	+41	No	Yes
Incentives (raffle) [35]	38 ^a	42	NS	Yes	Yes
Educational letter from leadership [35]	38 ^a	39	NS	Yes	Yes
On-site expert education [33]	21 ^a	22	NS	Yes	Yes

NOTE. NS, nonsignificant.

^a Rate from nonintervention arm of concurrent randomized trial of intervention.

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Mandatory Vaccination: Rationale

“Intentions and principles
do not protect patients;
results are needed.”

A. Pavia

(TJC, CMS: hand hygiene, “never events”)

Pavia A. CID editorial Feb 2010

Mandatory Vaccination: Ethics

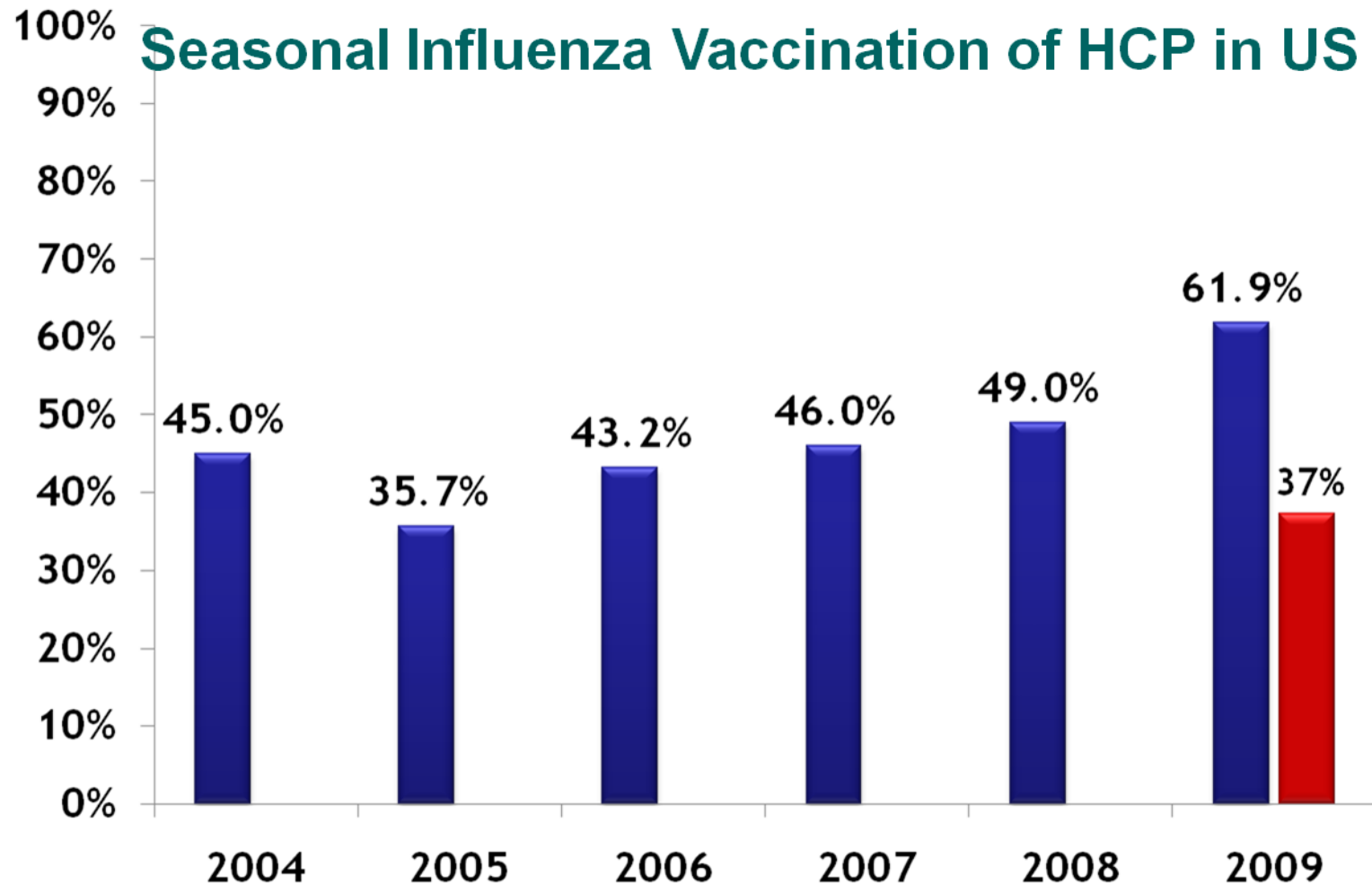
- Lots of literature
- Principles at stake:
 - Autonomy (HCW), individual rights
 - Beneficence (acting in best interest of pt)
 - Non-maleficence (do no harm)
 - Protection of public health
 - “state interest in public welfare”
 - Have less coercive methods been tried (and failed)

Strasser PB. AAOHN Journal 2007; 50 (1): 34. vanDelden et al. Vaccine 2008; 26:5562. Talbot TR. ICHE 2008; 29(2) 107. Tilburt et al. Vaccine 2008; 26 (Suppl4): D27. Helms et al. BMJ 2008; 337. Isaacs et al. BMJ 2008; 337. Anikeeva et al. AmJPublic Health; 2009; 99(1) 24; O'Neal, Converso, Olsen. AJN 2010; Stewart. NEJM 2009; Poland GA et al. Vaccine 2005; Sullivan et al. ExpertRevVaccines2009; Steckel. AAOHN 07.

Less Coercive Methods Worked?

- Recent meeting with abstracts on both sides:
- No mandate:
 - Rupp (#575, NE), Amrich (#584, TX), Cadena (#585, TX)
 - Raised rates substantially
 - 75 – 88% vaccination rates
- Mandates:
 - Livingston (#68, MO), Hansen (#566, ND), Kidd (#634, OH), Cormier (#385, HCA)
 - > 90% vaccination (91 – 99%)

Less Coercive Methods Worked?



CDC unpublished; Source NHIS
MMWR April 2, 2010

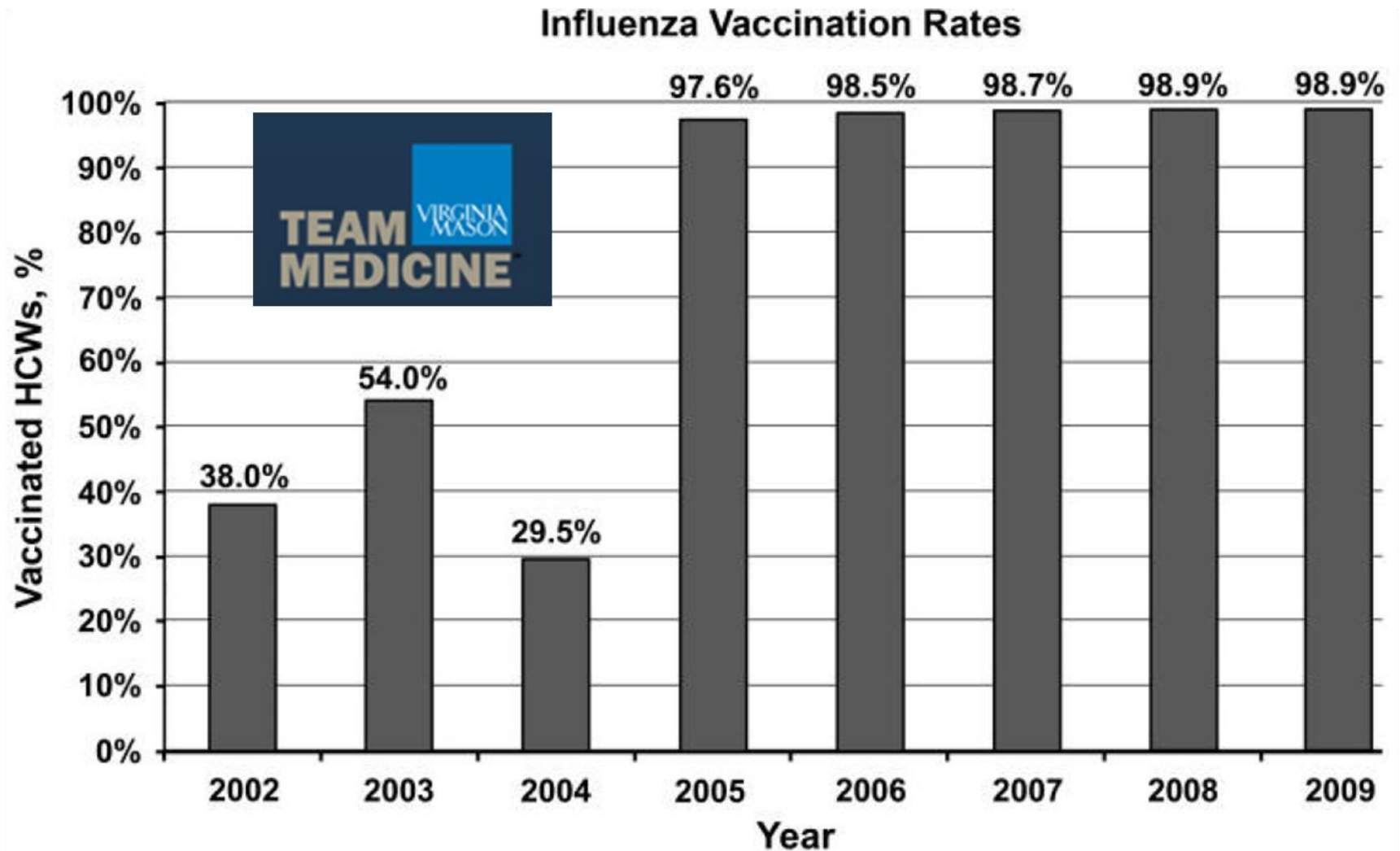
Increasing utilization of mandatory programs...

- At least 52 hospitals and 16 medical practices
- In 24 states + Puerto Rico
- Most allow medical and religious exemptions
 - some personal belief also
- Most require masking by those unvaccinated for any reason
- Regulatory interest in vaccine programs, vaccination rates

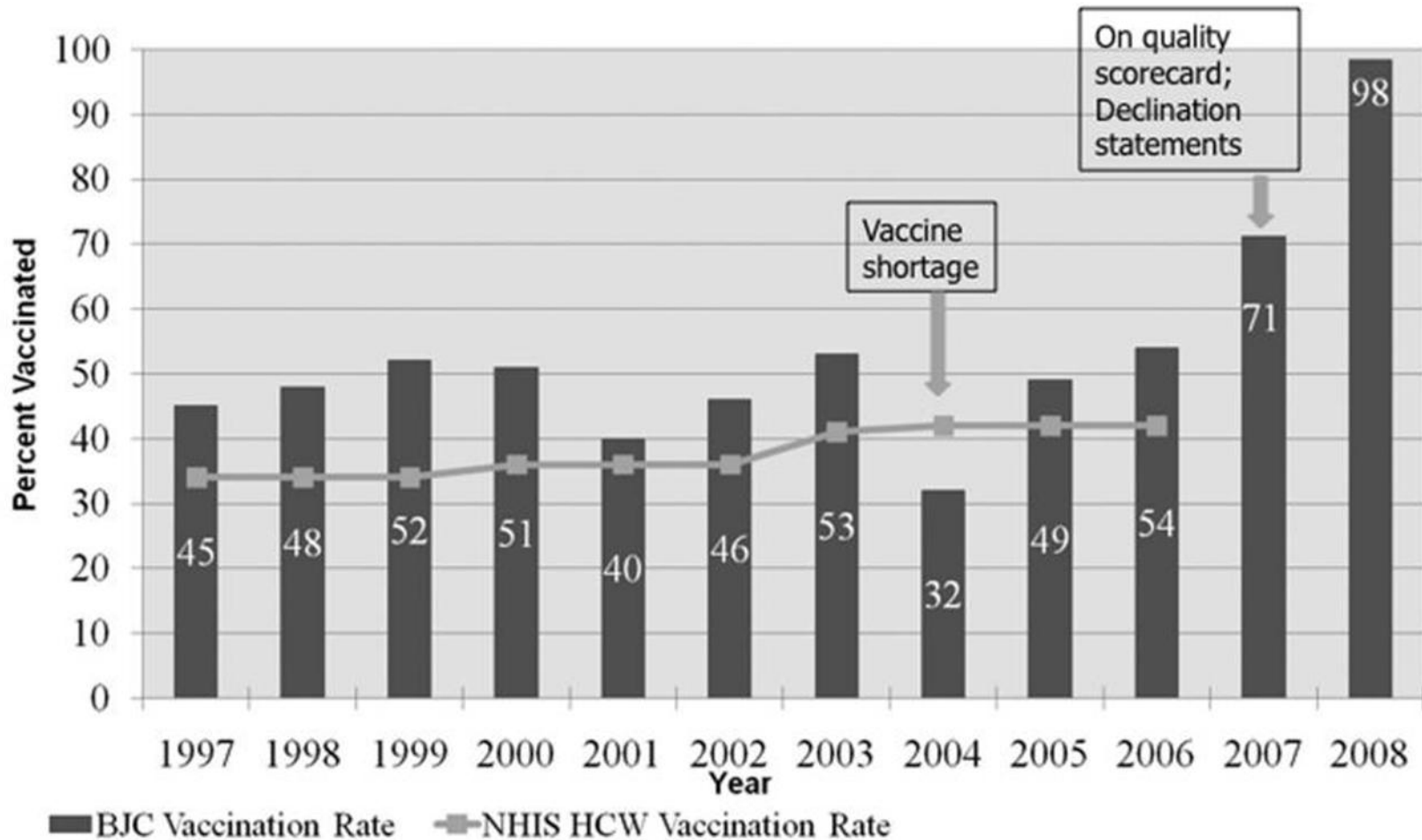
“Honor Roll for Patient Safety” Immunization Action Coalition

<http://www.immunize.org/laws/influenzahcw.asp>

Virginia Mason Medical Center Mandatory Influenza Vaccination Program



BJC will require staff get flu shots



2009: ~ 98% seasonal and H1N1

Babcock HM et al CID 2010;50:459+



- Community-based network of nine hospitals and healthcare services serving MD/Washington, DC
- 2008: ~50% vaccination rate (26,000 associates)
- 2009: Mandatory policy
 - All associates, medical staff members, other credentialed professionals, residents (employed and affiliated), volunteers, students, contractors, and all vendors who work for, provide services to or otherwise do business with MedStar Health must be vaccinated yearly with the influenza vaccine.*
 - Medical and religious exemptions allowed
 - **95% of affiliated MDs, 98% associates vaccinated**
 - 9 full time, 2 part-time and 17 PRN associates were terminated

163 hospitals across US; 150,000 HCP



- **Seasonal Flu Vaccination Program (status):**
 - As of November 1: 140,599 employees offered vaccine (98,067 clinical)
 - 135,584 vaccinated (94,530 clinical)
 - 5,015 declinations (3,537 clinical)

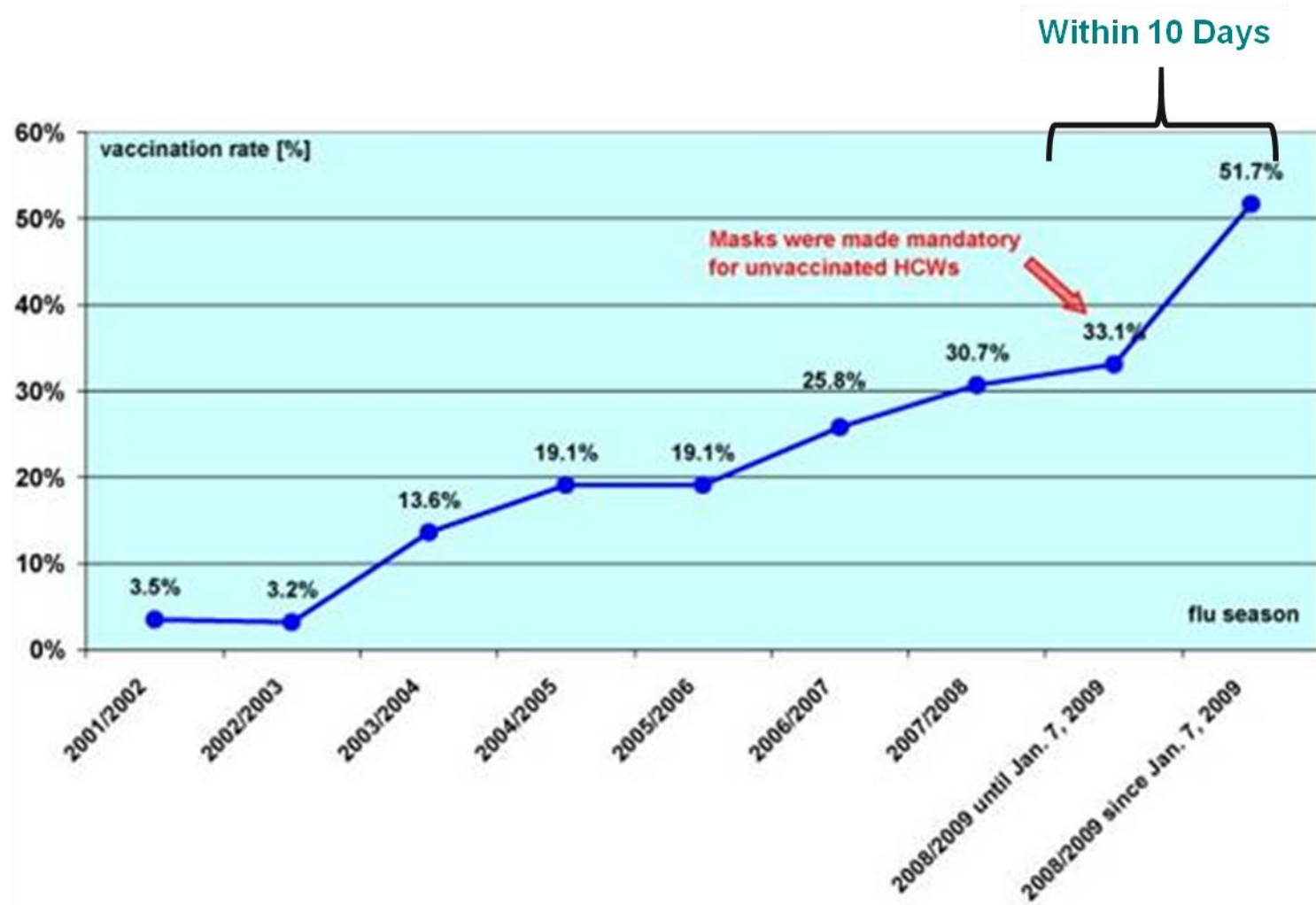
96% Vaccination Rate



Mandatory Vaccination: Practicalities

- Defining mandatory
 - What is mandatory: Vaccine? Vaccine/Declination?
 - Exemptions: Medical? Religious? Personal belief?
 - Consequences of non-compliance
 - Suspension/Termination of employment
 - Mandatory mask use
 - Monitoring and enforcement, consequences
 - Privacy/HIPPA issues
 - Perceived as protection (of HCW and pt) vs. punishment
- Reporting results
 - Vaccination rates (vs compliance rates)

Masks May Increase Vax Rates?



Mandatory Vaccination: Precedents?

Conditions for Employment in Healthcare

- Conditions for employment in place at many facilities
 - MMR or evidence of immunity
 - Varicella vaccine if no evidence of immunity
 - *Hepatitis B vaccine series, evidence of immunity, or signed declination*
 - Annual tuberculin skin testing
- Ingrained into training/schools

History of Vaccine Mandates

- 1809: MA passed first law
 - Required smallpox vaccination of population
- 1905: *Jacobson v. Massachusetts*
 - Supreme court upheld right to require vaccination (exercise of state's police power)
- 1922: *Zucht v. King*
 - Supreme Court upheld school entry vaccination laws
 - Do not require epidemic conditions exist to compel vaccination

United States Supreme Court

“The liberty secured by the Constitution of the United States...does not import an absolute right...to be wholly freed from restraint. There are manifold restraints to which every person is necessarily subject for the common good.... (1905)

“[A parent] cannot claim freedom from compulsory vaccination for the child any more than for himself on religious grounds. The right to practice religion freely does not include the liberty to expose the community to infectious disease. Parents may be free to become martyrs themselves; but it does not follow they are free...to make martyrs of their children.” (1944)

Maier v. Besser, 1972

- William Maier took advantage of a New York State decision, successfully claiming his First Amendment rights. “Can’t discriminate against me because I’m not a Christian Scientist.”
- 48 states now have religious exemptions to vaccination

Sherr v. Northport Union School, 1987

- Lewis Levy argued: “To us, religion is not a temple; religion is not something outside of ourselves.”
- Judge agreed: Vaccine exemptions granted “if beliefs were held with the strength of religious convictions” even if parents weren’t members of a religious group.
- 21 states now have philosophical exemptions.

Exemption Rates Based on Allowance of Person Belief Exemptions

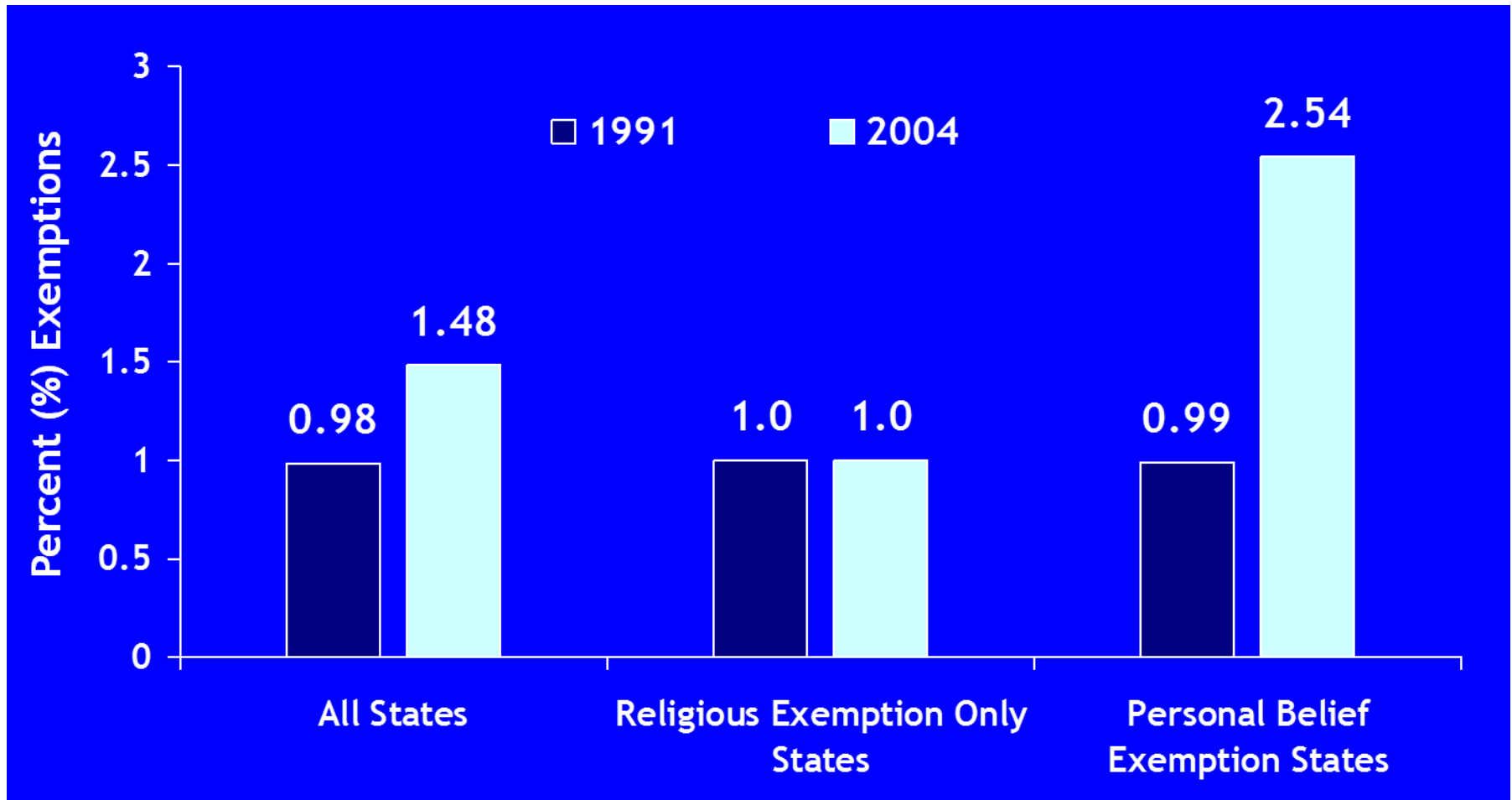
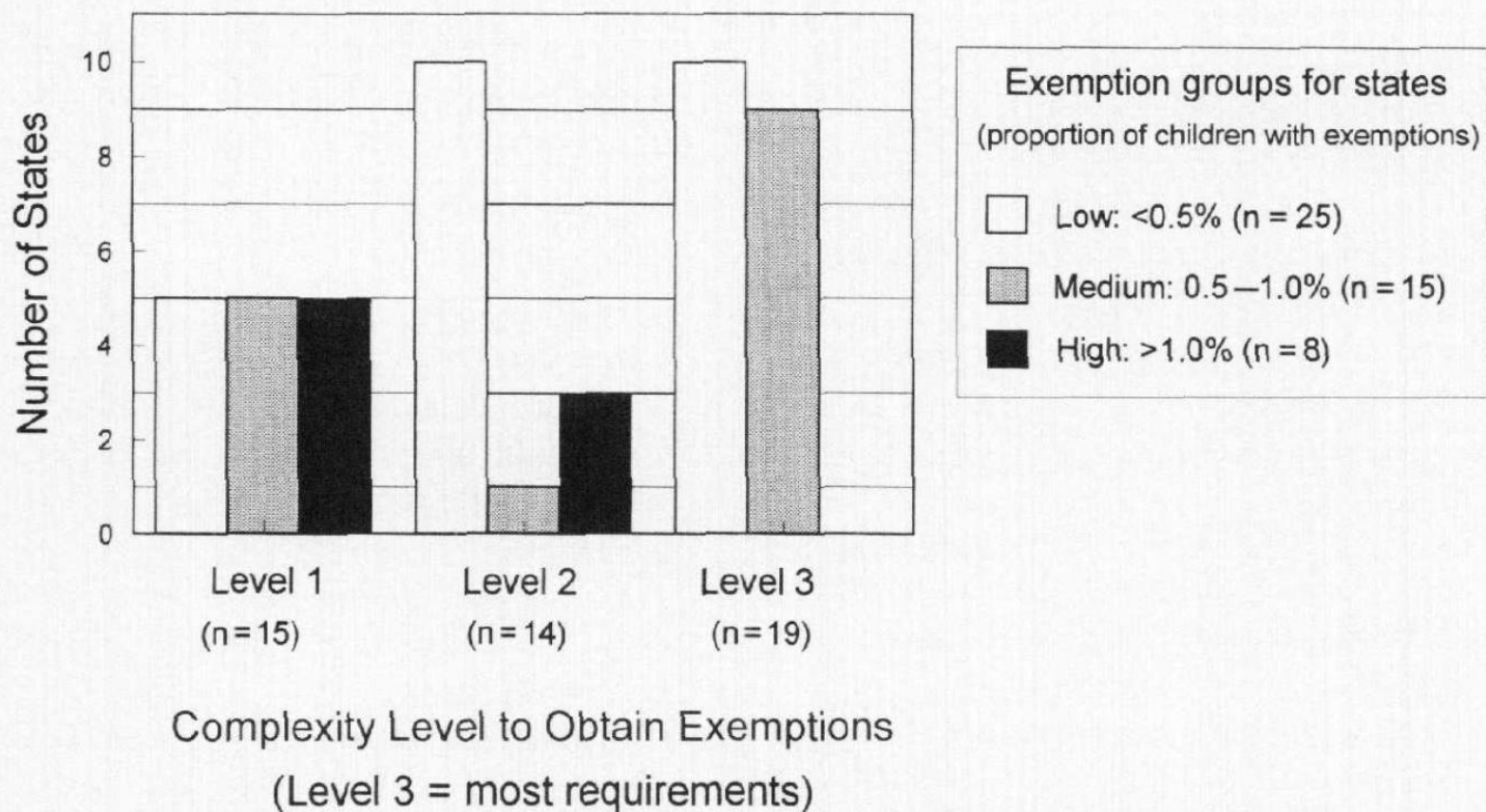


FIGURE 1—Proportions of exemptions claimed among states, by complexity level (1–3): United States, 1998.



Mandating Vaccination: PROS

- It works
- Ethical & professional imperative
 - Act in patient's best interest
 - Do no harm
- Protects patients and HCP
- Other conditions for employment exist:
 - Immunity to rubella/measles
 - Hepatitis B vaccination
 - Annual PPD testing

Mandating Vaccination: CONS

- Coercive
- Patient safety > HCP autonomy
- Should fully implement other approaches
 - If haven't already...

Mandatory Program: (Potential) Barriers

- Fear of negative impact on employee-employer relationship
 - May be mitigated by clear communication, consistency, education, leadership
 - Not seen in employee satisfaction surveys at VMMC
- Fear of litigation
- Fear of union reaction
- Defining and dealing with exemptions, non-compliance
 - Masking? Suspension? Dismissal?

Mandatory Program: (Potential) Barriers

- Anti-vaccine movement; persistent misinformation
 - Ease of access to anti-vaccine materials (Internet)
 - Vaccines contain poisons, toxins
 - Vaccines erode immunity; superiority of “Natural immunity”
 - Vaccines cause disease: autism, SIDS
 - Conspiracy theories: profit motivations of medical community, “in league with” vaccine manufacturers, cover-ups of adverse events
 - Vaccines used to sterilize target populations
 - Alternative medicine: homeopathy, diets, vitamins

Mandatory Program: Benefits

- Improved vaccination coverage (Goal!)
 - Patient protection
 - (Decreased absenteeism)

Maintenance of workforce = patient safety issue

- Expectation of compliance; culture of safety
- Public expectation (Moms-on-the-street test)
- Ready for vaccination rate to be used as a standard/reportable measure

Conclusions

- As a patient safety initiative, SHEA/IDSA endorse making influenza vaccination a condition of employment for healthcare professionals
 - HCP influenza vaccination is an important tool in preventing healthcare-associated influenza transmission
 - Mandates clearly increase HCP vaccination rates

Questions?